

**REMARKS**

In the Office Action of May 29, 2008, the Examiner (1) objected to the drawings; (2) rejected claims 5-9 and 18-22 as allegedly failing to comply with enablement requirement; (3) rejected claims 11 and 16 as allegedly obvious over U.S. Patent No. 5,644,597 (Ueda) and U.S. PGPub. No. 2003/0133493 (Suzuki); (4) rejected claims 18-20 and 22 as allegedly obvious over Ueda and U.S. Patent No. 7,320,062 (Master); (5) rejected claim 21 as allegedly obvious over Ueda, Master and U.S. Patent No. 5,642,382 (Juan); and (6) rejected claim 12 as allegedly obvious over Ueda, Suzuki, and U.S. Patent No. 7,039,097 (Terao). The Examiner also concluded that dependent claims 13-15 would be allowed if rewritten in independent form.

With this response, Applicants amend claims 12, 13 and 18, and cancels claims 11 and 20. Reconsideration is respectfully requested.

**I. EFFECTIVELY ALLOWED CLAIMS**

Applicants appreciate the effective allowance of claims 13-15. With this Response, Applicants amend claim 13 to rewrite the claim into independent form, including the limitations of the base claims 11. Thus, claims 13-15 should be in a condition for allowance. Applicants amend claims 12 to change the dependency to claim 13, given the cancellation of claim 11, and not to define over any prior art. Thus, claim 12 should be in a condition for allowance.

**II. DRAWING OBJECTIONS**

The Office Action dated May 29, 2008 objects to the drawings stating that “the drawings must show every feature specified in the claims. Therefore, the first control mechanism, the second control mechanism, and the third control mechanism must be shown or the feature(s) canceled from the claim(s).” Applicants respectfully submit that the first control mechanism, the second control mechanism and the third control mechanism are illustrated at least in Figure 5, elements 524a-524g, and disclosed in paragraph [0038] of the specification.

Based on the foregoing, Applicants respectfully request that the drawing objection be withdrawn.

### III. 35 U.S.C § 112 REJECTIONS

Claims 5-9 and 18-22 stand rejected as allegedly failing to comply with enablement requirement.

In regards to claims 5 and 8, the Office Action states that “claim 5 recites ‘a first control mechanism, a second control mechanism and a third mechanism’ for configuring an adaptive equalizer. Figure 6a-6e disclose the adaptive equalizer after the configuration, but none of the control mechanism is disclosed *[sic]* in the specification or the drawing.” Applicants respectfully traverse. Applicants submit that paragraph [0038] of the specification discloses “controlling multiplexers 524a-524g allow the reconfigurable CLE 500 to be used as a single-stage CLE 200 (Figure 2a), a two-stage CLE 210 (Figure 2b), a concatenated CLE 220 (Figure 2c), a sparse CLE 230 (Figure 2d), and single-stage equalizer pair CLE 304 (Figures 3 and 4).” Figure 6a-6e illustrate various embodiments of the reconfigurable CLE of Figure 5. In particular, Figure 6a-6e illustrate the control mechanisms 524a-524g (*i.e.*, multiplexers) set to their corresponding settings to configure the CLE to be used as one of the exemplary CLEs. Thus, Applicants submit that controlling mechanism is disclosed at least in paragraph [0038] of the specification and illustrated in Figures 5 and 6a-6e.

In regards to claim 18, the Office Action states that “claim 18 recites ‘a means for configuring the two or more adaptive equalizers and the plurality of operational blocks according to attributes of a single profile.’ None of these means are disclosed in the specification or the drawing.” Applicants respectfully traverse. Applicants submit that paragraph [0038] of the specification discloses “controlling multiplexers 524a-524g allow the reconfigurable CLE 500 to be used as a single-stage CLE 200 (Figure 2a), a two-stage CLE 210 (Figure 2b), a concatenated CLE 220 (Figure 2c), a sparse CLE 230 (Figure 2d), and single-stage equalizer pair CLE 304 (Figures 3 and 4).” Table 1 list the corresponding settings for the controlling mechanism to configure the CLE based on the attributes of the single profile. (Specification paragraphs [0039]-[0040]). Thus, Applicants submit that the means for configuring (524a-524g (*i.e.*, multiplexers) in Figure 5 and 6a-6e) the two or more adaptive equalizers is disclosed at least in paragraphs [0038]-[0040] of the specification.

Based on the foregoing, Applicants respectfully request that the 35 U.S.C § 112, first paragraph rejections be withdrawn.

#### IV. ART BASED REJECTIONS

##### A. Claim 18

Claim 18 stands rejected as allegedly obvious over Ueda and Master.

Ueda is directed towards an adaptive equalizer and adaptive diversity equalizer. (Ueda Title). In particular, Ueda teaches an adaptive equalizer including a decision feedback equalizer and a linear adaptive equalizer. (Ueda Col. 45, lines 52-67 to Col. 46, lines 1-40). Further, Ueda appears to teach a delay measuring circuit, comprising a correlator, for determining multipath propagation characteristic for a channel. (Ueda Abstract). Ueda also teaches a comparator that selects one of the adaptive equalizers that is expected to have the minimum sum of equalized square errors. (Ueda Col. 36, lines 6-19). Therefore, Ueda appears to teach selecting one of the adaptive equalizer that is expected to have the best performance, and deactivating the remaining adaptive equalizers.

Claim 18, by contrast, specifically recites “a means for disabling a computational resource of at least one of the two or more adaptive equalizers according to said attributes of the signal profile; the means for selectively interconnecting and the means for disabling comprises a plurality of multiplexers.” Applicants submit that Ueda and Master do not teach or fairly suggest such a system. In particular, Ueda teaches selecting the appropriate adaptive equalizer and deactivating the remaining adaptive equalizers, but Ueda is silent as to disabling only computational components of at least one of the two or more adaptive equalizer while the two or more adaptive equalizers are still active. Thus, even if hypothetically the teachings of Master are precisely as the Office action suggests (which Applicants do not admit), Ueda and Master still fail to teach or suggest “**a means for disabling a computational resource of at least one of the two or more adaptive equalizers according to said attributes of the signal profile; the means for selectively interconnecting and the means for disabling comprises a plurality of multiplexers.**”

Based on the foregoing, Applicant respectfully submits that claim 18, and all claims which depend from claim 18 (claims 19 and 21-22), should be allowed.

**V. CONCLUSION**

In course of the foregoing discussions, Applicants may have at times referred to claim limitations in shorthand fashion, or may have focused on a particular claim element. This discussion should not be interpreted to mean that the other limitations can be ignored or dismissed. The claims must be viewed as a whole, and each limitation of the claims must be considered when determining the patentability of the claims. Moreover, it should be understood that there may be other distinctions between the claims and cited art which have yet to be raised, but which may be raised in the future.

Applicants respectfully request reconsideration and that a timely Notice of Allowance be issued in this case. If the Examiner feels that a telephone conference would expedite the resolution of this case, he is respectfully requested to contact the undersigned. It is believed that no extensions of time or fees are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required (including fees for net addition of claims) are hereby authorized to be charged to the Texas Instruments Incorporated's Deposit Account No. 20-0668.

Respectfully submitted,

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